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CLAIMS

1.	A m	ethod for identifying proteins, to which a subject with cancer		
	prod	uces autoantibodies, said method comprising:		
	(a)	extracting proteins from a sample of cells;		
	(b)	separating the extracted proteins by two-dimensional		
electrophore	sis;			
	(c)	transferring the proteins separated by two-dimensional		
		electrophoresis to a membrane;		
	(d)	incubating the membrane with antiserum from a subject known		
		to have the cancer;		
	(e)	detecting the proteins to which autoantibodies in the patients		
		serum have bound; and		
	(f)	comparing the proteins to which antibodies in the subject's		
		serum sample bind to proteins to which antibodies in control		
		serum sample bind,		
	where	ein those proteins bound by antibodies in the subject's serum but		
	not th	e control serum are identified as proteins to which a subject with		
	cance	r produces autoantibodies.		
2	The n	nethod of Claim 1 wherein the sample of cells is derived from the		
	subjec	et's tumor.		
3.	3. The method of Claim 1 wherein the sample of cells is derived from a			
	continuous cell line representative of the subject's tumor.			
4.	The m	ethod of Claim 1 wherein the step of detecting the proteins to		
	which	autoantibodies in the subject's serum sample have bound		
	electrophore 2	prod (a) (b) electrophoresis; (c) (d) (e) (f) where not the cancer 2 The m subject 3. The m contin		

comprises the use of a signal-generating component bound to an

antibody that is specific for antibodies in the subject's sample.

	5.	A method for diagnosis and prognosis of cancer in a subject,			
		comprising:			
		(a)	obtaining a serum sample from a subject; and		
5		(b)	detecting the presence of autoantibodies specific for a		
			protein identified using the method of Claim 1,		
		wherein the p	presence of autoantibodies indicates the presence of		
	cancer.				
	6.	A method for	r diagnosis and prognosis of cancer in a subject,		
10		comprising:			
		(a)	obtaining a serum sample from a subject; and		
		(b)	detecting the presence of autoantibodies specific for a		
		,	β-tubulin isoform,		
		wherein the p	presence of autoantibodies specific for a β-tubulin isoform		
15		indicates the	presence of cancer.		
	7.	The method of	of Claim 7 wherein the subject is a neuroblastoma patient.		
	8.	The method o	of Claim 7 wherein the presence of autoantibodies in the		
		sample is mea	asured by an immunoassay comprising:		
		(a)	immobilizing a protein identified using the method of		
20			Claim 1 onto a membrane or substrate;		
		(b)	contacting the membrane or substrate with a subject's		
			serum sample; and		
		(c)	detecting the presence of autoantibodies specific for the		
			protein in the subject's serum sample,		
25		wherein the p	resence of autoantibodies indicates the presence of		
	cancer.				

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- The method of Claim 8 wherein the immobilized protein is a β -tubulin 9. isoform. A method for diagnosis for the presence of cancer in a subject 10. comprising, detecting in a sample of cells derived from said subject the expression of a protein identified using the method of Claim 1. The method of Claim 10 wherein the expression of the protein 11. identified using the method of Claim 1 is detected using an immunoassay. 12. The method of Claim 11 wherein the immunoassay is an in situ hybridization assay. The method of Claim 11 wherein the immunoassay is an 13. immunoprecipitation assay. The method of Claim 11 wherein the protein is a β -tubulin isoform. 14. A method for stimulating in a subject an immune response specific for 15. a protein identified using the method of Claim 1, comprising administering to said subject a composition containing said protein, in an amount sufficient to elicit an immune response.
 - 16. A method for stimulating in a subject an immune response specific for a protein identified using the method of Claim 1, comprising administering to said subject cells from the immune system derived from said subject.
 - 17. The method of Claim 1 wherein the protein is a β -tubulin isoform.

- 18. A composition comprising a protein identified using the method of Claim 1 and an acceptable carrier.
- 19. A composition containing an antibody that immunospecifically binds to a protein identified using the method of Claim 1.
- 5 20. The composition of Claim 18 wherein the antibody is conjugated to a signal-generating compound.
 - 21. The composition of Claim 18 wherein the antibody is conjugated to a cytotoxic reagent.